ences for his loan of the western species of *Brychius*, for suggestions, and verification of the determination.

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Notes on the Chilopod Genera Linotaenia and Tomotaenia with Description of a New Korynia

By Ralph V. Chamberlin

In reviewing the representatives of the chilopod family Linotaeniidae from the western states, it has seemed desirable to clarify and justify the nomenclature that I believe must be applied to them and to list the synonymies that seem clear together with notes on those that seem probable.

The type of the new *Korynia* described is retained for the present in the author's collection.

Genus **LINOTAENIA** C. L. Koch

Linotaenia C. L. Koch, 1847, Rev. d. Myr., pp. 86, 188.
Strigamia Sager, 1856, Proc. Acad. Nat. Sci. Philadelphia, vol. 8, p. 109; Wood, 1865, Tr. Amer. Phil. Soc., ser. 2, vol. 13, p. 181 (Non Gray, 18424); Crabill, 1953, Ent. News, vol. 64, p. 169.
Scolioplanes Bergsöe and Meinert, 1866, Naturh. Tidsskr., ser. 3, vol. 7, p. 48.
Linotaenia Pocock, 1890, Ann. Mus. Civ. Genoa, ser. 2, vol. 9, p. 8; Bollman, 1893, Bull. U. S. Nat. Mus., no. 46, p. 142; Cook, 1895, Amer. Nat., vol. 29, p. 866.

A genus *Strigamia* was proposed by Gray in 1842 (Cycl. Anat. and Physiol, vol. 3, p. 547) with no more than the fol-

lowing characterization: "Eyes none. Antennae 14 jointed, moniliform, rather elongate. Feet very numerous, 50 or more." This description is so general as to cover the entire order of Geophilida, providing neither generic nor family characters that might serve to place the genus. Since Gray neither named nor indicated any species for it, *Strigamia* has been quite generally ignored by European workers. However, in 1856, as indicated above, Sager in America used the name in connection with his new species *fulva,* thus for the first time validating *Strigamia* as a genus. *Strigamia* must date from 1856, with Sager as its author, and not from 1842 with Gray as author.

However, before Sager's paper of 1856, C. L. Koch had already, in 1847, erected the genus *Linotaenia* for a group of species to which Sager's *fulva* belongs. *Strigamia* thus becomes a synonym of *Linotaenia.** In 1866, Bergsöe and Meinert set up a new name *Scolioplanes,* including under it among other forms the species *acuminata* and *crassipes* which Koch had previously placed in *Linotaenia.* It seems puzzling that European workers have continued to use *Scolioplanes* in spite of the fact that it is thus plainly a synonym of *Linotaenia.*

Genus **TOMOTAENIA** Cook

Tomotaenia Cook, 1895, Amer. Nat., vol. 29, p. 866.
Paraplanes Verhoeff, 1933, Ark. Zool. (Stockholm), vol. 26, no. 10, p. 22.
Generotype.—*T. parviceps* (Wood).

In 1895, Cook sought to restrict *Linotaenia,* not to replace it, by proposing a genus *Tomotaenia* to include the American species, which he suggested differed from the European forms "in details of the mouthparts" without, however, giving any hint as to what he supposed these differences to be. However, he named as type of his genus a Pacific coast species, *Strigamia parviceps* Wood, which does typify well a group of species ade-

* If typical *fulva* Sager proves to have the last pretergite separated from the corresponding pleurites and this character is accepted as of subgeneric significance, *Strigamia* would be available for the subgeneric name and *Protoplanes* Verhoeff would fall as a synonym to it.

quately distinct from *Linotaenia,* a group, so far as known, not represented in the eastern state, but occurring also in Asia.

For an Asiatic representative of this group, Verhoeff in 1913 proposed a genus *Paraplanes,* naming as its type, a new species, *P. svenhedini.* In 1938 he attributed to this genus a California species to which he gave the name *P. californicus* but which, as indicated above, is obviously a synonym of Wood's *parviceps,* the type of *Tomotaenia.*

Tomotaenia parviceps (Wood)

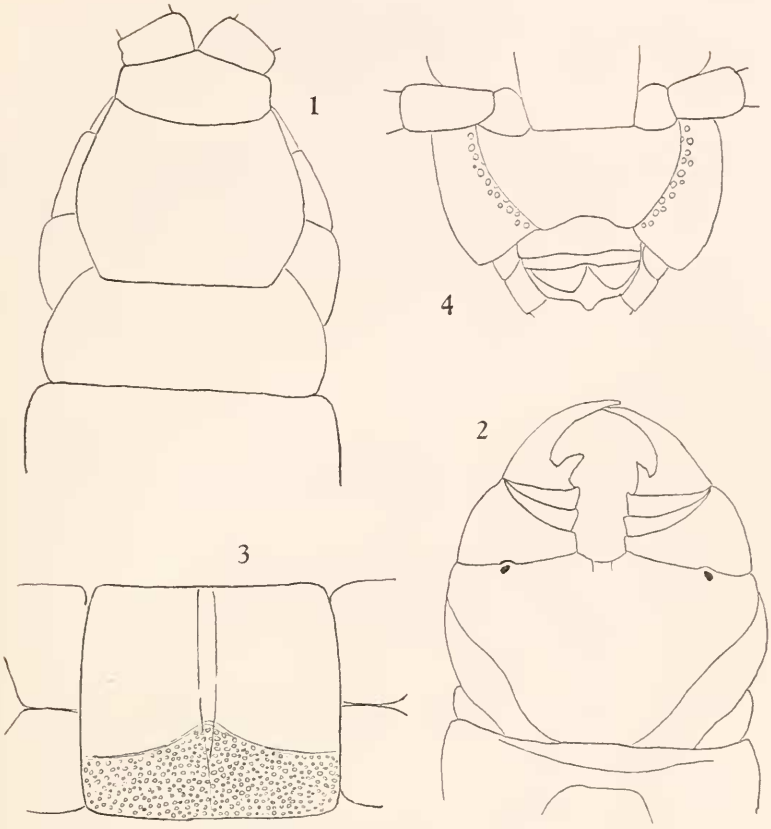
Strigamia parviceps Wood, 1863, Jour. Acad. Nat. Sci. Philadelphia, n. s., vol. 5, p. 49; 1865, Trans. Amer. Phil. Soc., vol. 13, p. 187.
Strigamia epileptica Wood, 1863, Jour. Acad. Nat. Sci. Philadelphia, n. s., vol. 5, p. 49; 1865, Trans. Amer. Phil. Soc., vol. 13, p. 188, figs. 21, 22.
Non *Scolioplanes parviceps* Meinert, 1886, Trans. Amer. Phil. Soc., vol. 23, p. 25.
Scolioplanes imperialis Brolemann, 1896, Ann. Soc. Ent. France, vol. 65, p. 60, pl. 1, figs. 14–16.
Linotaenia rubelliana Chamberlin, 1904, Proc. Acad. Nat. Sci. Philadelphia, vol. 56, p. 656.
Linotaenia laevipes Chamberlin (non Wood), 1912, Pomona Jour. Zool. and Ent., vol. 4, p. 659.
Paraplanes californicus Verhoeff, 1938, Zool. Anz., vol. 122, p. 282.

Meinert (op. cit.) described as questionably Wood's *parviceps* "a specimen which was said to be a type of Dr. Wood" and which "was labeled '*Strigamia bidens* Wood' for which no more definite locality was given than" N. A.?). It seems inexplicable that Dr. Meinert should choose to ignore the original label and describe the specimen under another name without any explanation for doing so. His description was accepted by Attems (1929) as applicable to *parviceps* but not on the basis of any personal study. This identification was undoubtedly erroneous.

This large form, usually of a brilliant red color in life, a color that fades in preservatives, as here conceived occurs over much of California and north as far as British Columbia. Over this range it is subject to much variation in size of the mature

individuals and in number of pairs of legs without, however, showing any correlation between the variations and distribution or habitat, so far as studies so far made show. The variation in number of legs is from a minimum of 61 pairs (cotype of *rubelliana* from Palo Alto) to 91 pairs. A high number of legs seems to be especially common in Oregon and Washington. The maximum length so far recorded is that for the type of Wood's *epileptica,* 5½ in. or 140 mm. Other specimens measured by the author run up to 11–110 mm. Having made notes on the type of *epileptica* several years ago, it seems desirable to publish a redescription with some figures of this remarkably large specimen.

Tomotaenia epileptica (Wood) (*-parviceps*). A very large form, strongly attenuated cephalad, more moderately caudad. (The original description gave the color as orange throughout.) The head and dorsal plates, together with the prosternum, still exhibit the minute white punctation noted by Wood, with the general color now faded to brownish. The cephalic plate with median length nearly equal to the greatest width (cf. Fig. 1). Frontal suture present. Antennae filiform, contiguous at base. Basal plate of form shown in the figure, somewhat overlapped by the head. Claws of prehensors when closed not attaining front margin of head; tooth at base of claw large, obliquely subtruncate at tip (cf. Fig. 2). Dorsal plates smooth and shining, not sulcate. Spiracles all circular, the anterior ones large, gradually decreasing toward posterior segments. Ventral plates with a median longitudinal sulcus sharply impressed, with a transverse sulcus more or less evident behind middle and in front of proliferous area. Last tergite broad, caudally strongly convex. Last intertergite fused with pleurites. Last ventral plate very broad, its sides convex and strongly converging caudad, its caudal margin incurved. Coxal pores concentrated along and beneath border of sternite, opening into a broad longitudinal channel or furrow. Anal legs slender, the last joints broken off in type. Pairs of legs, 81. Length about 140 mm. Type taken in Oregon, vicinity of Puget Sound, by Dr. Kennedy. (Acad. Nat. Sci. Phila., no. 1080.)



Strigamia epileptica Wood, holotype

1. Head and prehensorial segment, dorsal view. 2. Prehensors. 3. Sternite of third segment. 4. Caudal end, ventral view (the segments somewhat telescoped).

Tomotaenia imperialis (Brolemann) (*-parviceps,* var.). This was based on a female with 83 pairs of legs taken in Washington. Its length is given as 68 mm. The one character given in Brolemann's description that might be regarded as possibly distinctive is the presence of a median longitudinal sulcus on the basal plate, not usually present or obvious in *parviceps.* However, occasional specimens of the latter species show a median white line from beneath the surface which it is thought is what Brolemann's specimen shows.

Genus **KORYNIA** Chamberlin

Korynia Chamberlin, 1941, Ann. Ent. Soc. America, vol. 34, p. 774.

This genus is closely related to *Tomotaenia* in having the coxal pores concentrated along and beneath the last sternite. It is known from species occurring in the Southwest from California to Texas. They are small, slender forms with coxal pores reduced in number, the new species described below being the largest so far known.

Korynia auxa new species

Color of preserved type reddish fulvous, the tergites in part with a deeper spot toward each border. Body very slender.

The head small, a little narrowed cephalad, with anterior margin convexly rounded; about equal in length and breadth; frontal line distinct.

Prehensors when closed attaining anterior margin of head; claws armed at base with a rather small, slenderly conical tooth, the other joints unarmed. Prosternum showing no chitinous lines; anterior margin with excision acute.

Dorsal plates not sulcate, the anterior ones somewhat irregularly rugose. Spiracles all circular. Sternites with a median sulcus; moderately puncto-rugose.

Last sternite broad, strongly narrowed caudad, trapeziform. Coxal pores few, along and beneath the sternite. Last dorsal plate shield-shaped but caudally subtruncate. Last intertergite separate from the pleurites which are well developed.

Anal legs of male crassate, not compressed, the claw reduced to a mere point.

Pairs of legs, 73. Length, 38 mm.

Locality.—California, Squaw Valley. One male taken Mar. 23, 1941, by S. and D. Mulaik. Differing from previously known species in larger size and greater number of legs.